VARI-FORM Terms and Definitions

Terms, acronyms, abbreviations and/or definitions for VARI-FORM's Quality and Environmental Management Systems and the Automotive Industry

Abbreviations and Acronyms	
A	
ACN	Authorized Change Notice
AETC	Authorized Excess Transportation Cost
AIAG	Automotive Industry Action Group
AM	Account Manager
APQP	Advanced Product Quality Planning
AQP	Advanced Quality Planning
ASN	Advanced Shipping Notification
ASQ	American Society of Quality
ATP	Authorization to Proceed
B	
BOM	Bill Of Material
BPL	Bender Parameter Log
BSR	Buzz Squeak Rattle
C	
CAR	Corrective Action Report
CI	Continual Improvement
CIP	Continual Improvement Program/Process
CLD	Certified Line Disruption
CLIPS	Container Logistics Information & Planning System (GM)
CLS	Certified Line Stoppage
CMM	Coordinate Measuring Machine
CN	Change Notice
CNA	Change Notice Authorization
COQ	Cost Of Quality
CP	Control Plan
CPK	Process Capability Index
CQMS	Chrysler Quality Management System
CS	Controlled Shipment
CSA	Common Sense Administration
CSM	Common Sense Manufacturing
C-TPAT	Custom – Trading Partners Against Terrorism
D	
DDMP	Design, Development & Manufacturing Process
DFMEA	Design Failure Mode & Effects Analysis
DR	Design Request
DRE	Design Release Engineering
DVP & R	Design Verification Plan & Report
E	
EC	Engineering Change

ECR	Engineering Change Request
EDI	Electronic Data Interchange
EI	Employee Involvement
ELV	End of Life Vehicle
EM	Engineering Manager
EMS	Environmental Management System
EOI	Emergency Operator Instruction
EOSD	End of Shift Duties
EPOL	Environmental Policy
EPRO	Environmental Procedure
ERGO	Ergonomics
E-Stop	Emergency Stop
EU	European Union
EWO	Engineering Work Order
F	
FESM	Front End Structural Module
FIFO	First In – First Out
FG	Finished Goods
FMEA	Failure Mode & effects Analysis
FPSC	First Production Shipment Certification
G	
GADSL	Global Automotive Declarable Substance List
GD & T	Geometric Dimensions & Tolerance
GPDS	Global Product Development System (Ford)
GQTS	Global Quality Tracking System (GM)
GSDB	Global Supplier Data Base (Ford)
H	
H/P	High Pressure
HR	Human Resources
I	
IMDS	International Material Data System
IR	Inspection Report
J	
JHSC	Joint Health & Safety Committee
JIT	Just in Time
K	
L	
LOI	Letter of Intent
L/P	Low Pressure
LPA	Layered Process Audit

M	
MA	Maintenance Associate
MBD	Master Bend Data
ME	Manufacturing Engineer
MM	Material Mover
MRB	Material Review Board
MRD	Material Request Date
MRD	Materials Requirements Planning
MRO	Maintenance, Repair and Other Items
MSDS	Material Safety Data Sheet
MY	Model Year
N	
NBD	New Business Development
NCM	Non Conforming Material
NCT	Non Conforming Ticket
NDT	Non Destructive Testing
NPV	Net Present Value
NVH	Noise Vibration Harshness
O	
OAE	Overall Asset Effectiveness
OEE	Overall Equipment Effectiveness
OEM	Original Equipment Manufacturer
OD	Outside Diameter
Offal	Engineered Scrap
OH & S	Ontario Health & Safety
OI	Operator Instruction
OM	Operations Manager
OT	Overtime
P	
P. Sticker	Partial Sticker
PA	Production Associate
PCC	Punch Control Chart
PCD	Punch Control Diagram
PCP	Prototype control Plan
PCR	Process Change Request
PDCA	Plan-Do-Check-Act
PE	Project Engineer
PEC	Proposed Engineering Change
PFD	Process Flow Diagram
PFMEA	Product Failure Mode & Effects Analysis
PIP	Partners In Protection
PL	Production Log or Process Leader
PLM	Product Lifecycle Management
PM	Preventative Maintenance
PO	Purchase Order

PPAP	Product Part Approval Process
PPE	Personal Protective Equipment
PPM	Parts Per Million
PPL	Press Parameter Log
PPV	Purchase Price Variance
PRA	Product Release Authorization
PRN	Product Release Notice
PRR	Problem Report & Resolution
PROX	Proximity Switch
PSH	Pressure Sequence Hydroforming
PSO	Part or Process Sign off
PSW	Part Submission Warrant
PTR	Production Trial Run
PV	Product Verification
Q	
QA	Quality Assurance
QB	Quality Bulletin
QE	Quality Engineer
QMS	Quality Management System
QPOL	Quality Policy
QPRO	Quality Procedure
QS	Quality Systems
QSA	Quality Systems Administrator
QT	Quality Technician
R	
RAP	Reynosa Assembly Plant
REACH	Registration Evaluation Authorization & restriction of CHemicals
REV	Revision
RFA	Request For Approval
RFD	Request For Design
RFQ	Request For Quote
RI	Receiving Inspection
RMA	Return Material Authorization
RPA	Request Program Approval
RPN	Risk Priority Number
RT	Raw Tube
RT Spec	Raw Tube Specification
RTV	Return To Vendor
S	
SA	Sub Assembly
SC	Significant Characteristics
SDR	Supplier Discrepancy Report
SOP	Standard Operator Procedure
SOP	Start of Production (Chrysler term)
SPC	Statistical Process Control
SQA	Supplier Quality Assurance
SRA	Specification Release Authorization

SREA	Supplier Request for Engineering Approval
SS	Shift Supervisor
STA	Supplier technical Assistance
STD	Standard
T	
TCE	Team Centre Engineering
U	
V	
VBS	Vari-form Business System
VF	Vari-form Forms
VFPUC	Vari-form Punch Unit Cylinder
VAIPER	Vari-form Accident Investigation Problem Explanation Report
VIPER	Vari-form Internal Problem Explanation report
W	
WA	Weld Audit
WDR	Weld Defect Report
WHMIS	Workplace Hazardous Material Information System
WIP	Work In Process / Work in Progress
WO	Work Order
WS	Weld Schedule
X	
Y	
Z	

Definitions / Terms

8-D
An automotive-specific Corrective action report (CAR). The 8-D process guides you through a series of eight steps in order to determine root causes and corrective actions in a formal documented manner.

Approved Materials
Materials governed either by industry standard specifications (e.g., SAE, ASTM, DIN, and ISO) or by customer specifications

Approved Subcontractors List
An approved list of VARI-FORM sub contractors and/or suppliers

Auditees
The site, department or Workcell and the people being assessed for conformance to VARI-FORM policies and/or procedures or other standards

Auditor(s)
The qualified individual(s) who assess the conformance to the VARI-FORM Quality/Environmental Management System, referenced documents and/or other standards and report their findings to the appropriate management personnel.

Certified/Non-certified Parts
Regular production parts are considered "Certified" by the vendor and therefore do not require receiving inspection. A part shall become Non-certified and require receiving inspection for any of the following reasons:
1. New Vendor or new parts
2. Engineering changes that modify the part
3. Less than three consecutive shipments with acceptable part quality record
4. Quality problems with parts with unsatisfactory resolution

The part may be eligible to become "Certified" after meeting the above criteria for points 3 and 4. In cases where there is unsatisfactory resolution on a long term basis, then the part may become "Certified" if an inspection check can be incorporated in the VARI-FORM process to detect the specific problem. For example, dimple testing on tubes for weld seam integrity at beginning of each new skid of material.

Characteristics
Product feature that is being monitored by data collection

Contracts
Used in the context of this procedure, covers any document or arrangement with customers wherein pricing, as well as terms and conditions, are established. Included in this definition are:
(a) **Purchase Order (PO):** agreements stating quantities, pricing, shipping and payment terms
(b) **Statement of Work/Request for Proposal (SOE / RFP):** typically multiple page documents which outline the program requirements
(c) **Agreements:** detailed contracts entered into through negotiation. Typically include quotations as well as commercial and legal documents.

Control Plans
They are written descriptions of the system for controlling production parts or bulk materials and processes. They are written by organizations to address the important characteristics and engineering requirements of the product. Each part must have a Control Plan, but in many cases, "Family" Control Plans can apply to a number of parts produced using a common process. Control plans are an output if the quality plans.
The Control Plan shall cover three distinct phases, as appropriate,
(a) **Prototype:** a description of the dimensional measurements, materials and performance tests that will occur during building of the prototype. The organization shall have a prototype control plan, if required by the customer.
(b) **Pre-Launch:** a description of the dimensional measurements, material and performance tests that occur after prototype and before full production. Pre-launch is defined as a production phase in the process of product realization which may be required after prototype build.
(c) **Production:** documentation of product/process characteristics, process controls, tests and measurement systems that occur during mass production.

Controlled Document
A document determined by management that needs to be controlled, ensuring that the recipient will receive the most current copy.

Coordination Team
The team of individuals called upon to handle the planning and implementation of the ECR.

VARI-FORM Terms and Definitions

Corrective Action Report (CAR)
Form, VF-029, that is used which provides a process for reporting, classifying, and analyzing failures, planning corrective and preventative actions and verification of actions in response to failures.

CP & CPK
Capability indexes (refer to AIAG, Statistical Process Control & Measurement Systems Analysis)

Customer
Recipient of the organizations or supplier's product or service
A company who purchases products from VARI-FORM

Customer-Driven Document (External)
A controlled document or engineering standard/specification that is generated by the customer or an outside association

Customer Supplied Product
Includes Raw material, components and returnable containers

Design Responsible
A supplier is defined as Design Responsible if it has the authority to establish a new, or change an existing product specification for any product shipped to a customer. VARI-FORM is not design responsible

Environmental Management System (EMS)
EMS refers to the management of an organizations environmental program in a comprehensive, systematic, planned and documented manner. It includes the organizational structure, planning and resources for developing, implementing and maintaining policy for environmental protection. VARI-FORM Quality and Environmental Management Systems are integrated for reasons of efficiency.

Estimation
Generally a directional cost which is used by our customers to make decisions on project direction, engineering changes, etc. Estimates should be within +/- 10% of the final cost, but are not considered a firm quote.

Finished Goods
Goods ready to go to customer

Green "OK" Dot
Dot used to identify inspection/test status. It is placed on product tags/labels to identify that the product is approved for processing to the next operation. The information on this dot shall include initials of employee.

IMDS
The **I**nternational **M**aterial **D**ata **S**ystem is a collective, computer-based material data system used by Automotive OEMs to manage environmentally relevant aspects of the different parts used in vehicles. Through this system, the automotive industry is able to reconstruct the complete material flow.

Input
An input is the raw material or WIP that begins the manufacturing process. This transaction will be recorded on product traceability input forms.

Inspection Report
A document used by the production work cell which identifies the inspection and test requirements. It is also use to record the inspection results.

Julian Date
The date expressed as the number of days since January 1 of the current year. Example: January 1 would be the 1st day and December 31st would be the 365th day (unless leap year).

Lot
Shall consist of all like product, and is not to exceed 24 hours or 3 full shifts of production per term.
Note: Traceability is typically maintained to a container basis utilizing tag numbers or and is not affected by lot size.

Lot Number
The lot number is a numeric code that identifies the Julian date and station/cell (when required) during which a "Lot" of product was manufactured.

Non Conformance
Product that does not conform to prescribed specifications

Non Compliance
The non-fulfillment of a specified requirement

Objective Evidence
Information which can be proved true based on facts obtained through observation, measurement, test or other means

Obsolete Document
A document that is no longer applicable, is not at the latest revision and/or is out-of-date

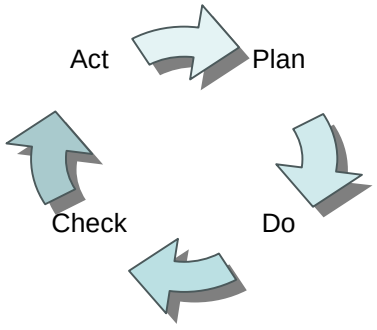
Output
An output is the produced product that comes from the manufacturing process and is subsequently packaged and shipped. This transaction will be recorded on product traceability output forms.

Part Layout Report
Part dimensions, characteristics co-ordinates and their respective nominal's, tolerance and deviations as generated by part program output on CMM

Part Program
CMM program which is used to measure part characteristics in a consistent manner

Plan-Do-Check-Act (PDCA)
PDCA is an iterative four-step problem-solving process typically used in business process improvements. Just as a circle has no end, the PDCA cycle should be repeated again and again for continuous improvement.

Plan: establish the objectives and processes necessary to deliver results in accordance with customer requirements and the organizations policies
Do: implement the processes
Check: monitor and measure processes and product against policies, objectives and requirements for the product and report the results
Act: take actions to continually improve process performance



Poka-yoke
This is a Japanese term (? ? ? ?) that means "fail-safing" or "mistake-proofing". A poka-yoke is any mechanism in a lean manufacturing process that helps an equipment operator avoid (*yokeru*) mistakes (*poka*). Its purpose is to eliminate product defects by preventing, correcting, or drawing attention to human errors as they occur

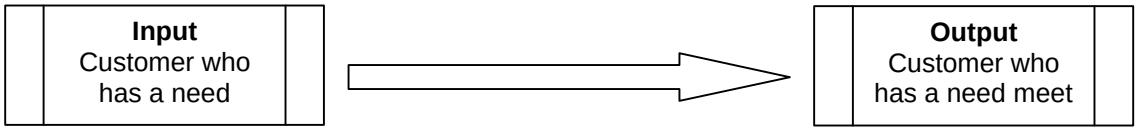
Policy
Policy is typically described as a deliberate plan of action to guide decisions and achieve rational outcome. Policies are issued by management, and set the direction, tone and intent of the company to accomplish a specific goal. Term is not normally used to denote what is actually done; this is normally referred to as a procedure. Where as a policy will contain the 'what' and the 'why' procedures contain the 'what', the 'how', the 'where' and the 'when'.
A policy is a level one document.

Preventative Maintenance (PM) Schedule and Report

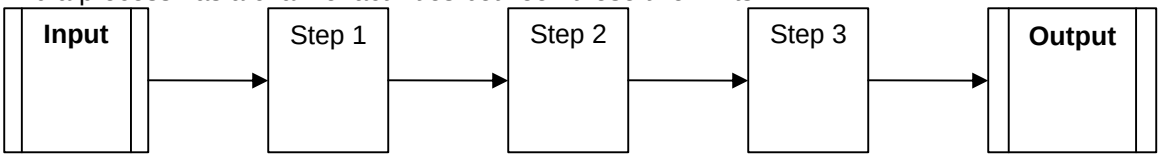
Maintenance PM Schedule
This is a schedule of planned preventative maintenance, determining the pieces of equipment to be completed each week, by maintenance associates.
Maintenance PM Report
This refers to a check-list of planned preventative maintenance tasks, for a specific equipment item, that are assigned to the maintenance associates. The tasks are divided into three categories, mechanical, electrical and tooling.
Production PM Schedules
This refers to a schedule of planned preventative maintenance tasks that are assigned to the production associates for each production Workcell.

Procedure
Procedure is a specified series of actions or operations which have to be executed in the same manner in order to always obtain the same result under the same circumstances (example, emergency procedure). Less precisely speaking, this word can indicate a sequence of tasks, steps, decisions, calculations and processes, that when undertaken in the sequence produces the described results, product or outcome. A procedure usually induces a change.
Procedures are usually cross-functional in nature and are level 2 documents.

Process
For an organization to function effectively, it has to determine and manage numerous linked activities. An activity or set of activities using resources, and managed in order to enable the transformation of inputs into outputs, can be considered a process. Often the output from one process directly forms the input to the next.
A process has a start and an end defined by two limits.



And a process has a chain of activities between these two limits.



Process Approach
The application of the system of processes within an organization, together with the identification and interactions of these processes, and their management to produce the desired outcome, can be referred to as the "process approach".
An advantage of the process approach is the ongoing control that it provides over the linkage between the individual processes within the system of the processes, as well as over their combination and interaction.
When used within a quality management system, such an approach emphasizes the importance of
(a) Understanding and meeting requirements
(b) the need to consider processes in terms of added value,
(c) obtaining results of process performance and effectiveness, and
(d) Continual improvement of processes based on objective measurement.

Process Change
Process change is when modifications are made to a manufacturing process that could directly affect how production parts are made. Changes to tooling, equipment, parameters and settings are examples of what could influence the product outcome.

Product
All materials, components, work in process, and finished goods.

Prototype
The original concept of a component or assembly, manufactured from production intent methods but not necessarily from production tools to be utilized for non-production use.
Prototype is often used as part of the product design process to allow engineers and designers the ability to explore design alternatives, test theories and confirm performance prior to starting production of a new product.

Purchase Order (PO)
A purchase order (PO) is an approved document issued by a buyer to a seller, indicating types, quantities, and agreed prices for products or services the seller will provide to the buyer.

Quality/Environmental (QMS / EMS) Audit
A systematic and independent assessment / examination to determine whether quality/environmental activities and related results comply with planned arrangements. Also, whether these arrangements are implemented effectively and are suitable to achieve objectives.

Quality Records
These are documents that provide evidence of conformity or non-conformity to requirements. Note: Due to the integration of some quality and environmental policies and procedures, some of the documents may contain both quality and environmental records

Quality System
A quality system is the organizational structure, responsibilities, procedures, processes and resources for implementing quality management.

Quotation
Is a formal quotation to Purchasing or Engineering as a result of, or in anticipation of, a Request for Quote (RFQ). The quotation should consider and document all engineering, manufacturing, shipping and all other relevant issues.

Raw Materials
As received production materials

REACH
Registration, **E**valuation, **A**uthorization and restriction of **Ch**emicals is a European Union (EU) chemical regulation that addresses the production and use of chemical substances, and their potential impact on both human health and the environment. All companies manufacturing or importing chemical substances into the EU must be registered before entering into commerce.

Receiving Inspection List
List identifies parts which are "non-certified" and parts that require Vendor Furnished Information". "Certified" parts are not identified on this list.

Receiving Inspectors
Inspectors may be Quality Technicians, Quality Engineers, or anyone deemed qualified by the Quality Assurance Manager.

Red "DO NOT USE" Dot
Dot used to identify inspection/test status. It is placed on vendor tags when receiving inspection is required. Refer to Monitoring and Measurement of Product procedure, QPRO-8.2.4.

Risk Priority Number (RPN)
This is a calculated number, a composite index, which is used to evaluate the ability of a process to control a product characteristic. At VARI-FORM the RPN is the product of three other indexes:

- Severity, Occurance and Detection for quality issues for internal & customer issues
- Severity, Response/timing and PPAPs/part Submission for supplier quality and delivery issues.
- Severity, Likelihood and Mitigation for environmental issues.

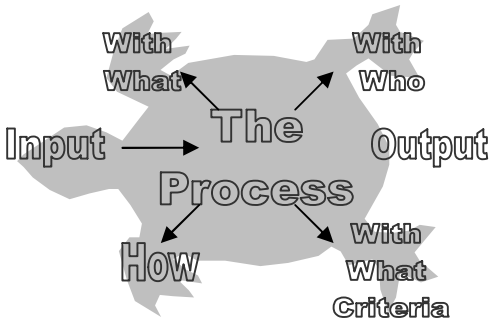
These are evaluated individually on a scale of 1 to 10 for VARI-FORM Quality and Envirnmental issues, and on a scale of 1 to 5 for Supplier Quality and Delivery issues. VARI-FORM Evaluation Criteria form, VF-118, is a guideline used for ranking the issues.

Subcontractor
Provider of production materials to VARI-FORM, which also include heat treating, painting, plating or other finished services

Supplier
A company who supplies raw material to VARI-FORM.

Supplier Descrepency Report (SDR)
A form, VF-103, that is used to record actual or potential supplier quality and/or delivery issues.

Turtle
A tool that graphically depicts the interactions of a process. It's name was given due to its shape which has a head (input), body/shell (process definition), tail (output) and the four legs (who, what, how & measureables/anaylisis).



Uncontrolled Document
Document, for or tag that does not have a control number or is a reproduction of a controlled document.

Work In Progress (WIP) Tag

Identifies the product which is partially processed material, or incomplete containers of Finished Goods. The inforamtion on this tag shall include; part number (VBS #), part description, lot number identification, tag number, quantity and the next operation. The inspection and /or test status will be identified as either unapproved or approved material for the next operation.
Note: Lines with carouselds or gravity racks can substitute the word "line: for the quantity on WIP tags to demonstrate that the tag is a result of continuous flow.

VBS Numbers

These are unique set of numbers that the **V**ARI-FORM **B**usiness **S**ystem creates and assigns to all products.

Vendor Furnished Information

VARI-FORM may require that the vendor furnish documentation prior to or with shipment of product. These documents may be material certifiications, SPC data charts or weld test results. This requirement will be documented and.or communicated to the vendor by means of any of the following:

- Product specification, e.g. Raw Tube Specifications
- Control plan
- Corrective action report
- Written request
- Purchase orders

Vendor tag

Identifies material supplied by an outside vendor or supplier. The information on this tag should include; vendor identification, part number, quantity, engineering change level (id applicable), serial number and inspection/test status.

VARI-FORM Internal Problem Explanation Report (VIPER)

A form, VF-027, that is used to record actual or potential internal, customer quality and/or shipping issues as well as envirnmental issues.

VIPER Review Board

Shall include representation from Quality Assurance (Manager or Engineer) and Operations Management (Operations manager or Shift Supervisor) plus other support resources, such as purchasing or Manufacturing Engineering, to complete the review of VIPERs, SDRs and/or CARs.

Weld Schedule

A process control document that defines the welding process for a product. The weld schedule identifies which type of weld test and other checks are necessary for the different process changes.

Weld Test

Can either be a destructive test that examines the cross-section of the weld or a non-destructive visual weld evaluation.